



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/705,564	11/03/2000	Rodric C. Fan	TRMB-2109	6675
70409 7590 11/21/2008 TRIMBLE NAVIGATION LIMITED C/O WAGNER BLECHER 123 WESTRIDGE DRIVE WATSONVILLE, CA 95076				
EXAMINER HO, HUY C				
ART UNIT 2617		PAPER NUMBER		
MAIL DATE 11/21/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/705,564

Applicant(s)

FAN, RODRIC C.

Examiner

HUY C. HO

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 17-26, 28, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 17-26, 28, 31 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 08/21/2008 have been fully considered but they are not persuasive because the argued features, i.e., a location specific frequency tuning system, and the system comprising: a location unit; a wireless interface to a wide area network; a user interface; a mobile receiving unit tuned to receive a broadcast signal based on a selected and a frequency selection unit for receiving a current location from the location unit, receiving tuning data of a set of frequencies of broadcast signals corresponding to different geographic regions at the current location from a database on the wide area network, selecting a plurality of frequencies from the set of frequencies of broadcast signals based on the strength of said plurality of frequencies, arranging said plurality of frequencies by subject content categories and geographic areas corresponding to said plurality of frequencies, generating a menu comprising each of said plurality of arranged frequencies and descriptions of specific broadcast format information corresponding to each of said plurality of arranged frequencies, outputting said menu to a user through said user interface, selecting one of said plurality of arranged frequencies based on a user selection, and tuning said mobile receiving unit to said selected arranged frequency, read upon the Morita in view of Beckmann as follows.

Morita teaches a radio tuning system in a vehicle for automatically tuned to a radio station that offers a desired program (the abstract), thus disclosing a location specific frequency tuning system. Morita teaches the system has a navigation unit, a microphone, a controller, a communication unit, a radio receiving unit for receiving desired programs based the current location of the vehicle (see figures 1, 2, 4, col 3 lines 5-67, col 4 lines 1-67), thus disclosing a location unit; a wireless interface to a wide area network; a user interface; a mobile receiving unit tuned to receive a broadcast signal based on a selected and a frequency selection unit for receiving a current location from the location unit, receiving tuning data of a set of frequencies of broadcast signals corresponding to different geographic regions at the current location from a database on the wide area network. Morita does not show selecting a plurality of frequencies from the set of frequencies of broadcast signals based on the

strength of said plurality of frequencies. Beckmann teaches a system where recorded on external storage may be information about typically either AM broadcast or FM broadcast radio stations available to the reproduction device through tuner, the availability is determined by a combination of proximity to and power of the broadcast signal and the list is assembled by the device automatically scanning the broadcast frequency spectrum and assemble a list of available radio stations by noting the frequency and by measuring strengths of receives signals, thus Beckmann discloses selecting a plurality of frequencies from the set of frequencies of broadcast signals based on the strength of said plurality of frequencies. As a result, the argued features were written such that they read upon the cited references.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1,2, 4-8 and 31-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Morita et al (5,864,753)** in view of **Beckmann et al (US 2007/0142945)**.

Regarding claim 1, (Previously Presented) Morita et al disclose a radio station tuning system comprising a radio receiver with an electronic tuner 16, a communication unit 18, and a navigation unit 20 that includes a GPS receiver or the like (see column 3, lines 6-14 and figure 1), which reads on the claimed, "A location-specific frequency tuning system comprising: a location unit; a wireless interface to a wide area network." The system receives input from the driver with a microphone (see column 3, lines 30-47), which reads on the claimed, "A user interface." The radio receiver with an electronic tuner 16 (see figure 1 and column 3, lines 6-14) reads on the claimed, "A mobile receiving unit tuned to receive a broadcast signal based on a selected frequency provided as input to the mobile receiving unit." A controller 14 receives data on a current position of the vehicle from the navigation unit 20, has access to the base station 200, and sends the base station the request message from the speech recognizing unit 12, the current position of the vehicle and an identification code of the vehicle (see column 3, lines 30-47), which reads on the claimed, "A frequency selection unit coupled to said mobile receiving unit, said frequency selection unit receiving a current location from the location unit." Morita further discloses it is also possible to specify radio stations offering programs of desired kinds using a display and a selector switch (see column 4, lines 40-46),

Morita does not show selecting a plurality of frequencies from the set of frequencies of broadcast signals based on the strength of said plurality of frequencies, arranging said plurality of frequencies by subject content categories and geographic areas corresponding to said plurality of frequencies. Beckmann discloses a system where recorded on external storage may be information about typically either AM broadcast or FM broadcast radio stations available to the reproduction device through tuner. Typically, availability is determined by a combination of proximity to and power of the broadcast signal. The list may be assembled by the device automatically scanning the broadcast frequency spectrum and assemble a list of available radio stations by noting the frequency and by measuring strengths of receives signals. Information about each radio station can also be collected and

stored, including station call letters and station format (see paragraph 42), which reads on the claimed, "receiving tuning data comprising a set of frequencies of broadcast signals corresponding to different geographic regions through the wireless interface at the current location from a database on the wide area network, selecting a plurality of frequencies from the set of frequencies of broadcast signals based on the strength of said plurality of frequencies." A common user interface screen is caused to appear on external display, with some of the portions of the screen having different identifying legends. Source selection region has graphical regions enabling the user to select the audio signal source. The information displayed in the available selection region may be ordered based on any of the metadata values. For example, the list of FM stations can be ordered by station ID, broadcast frequency or by category (see paragraphs 54-55), which reads on the claimed, "arranging said plurality of frequencies by subject content categories and geographic areas corresponding to said plurality of frequencies, generating a menu comprising each of said plurality of arranged frequencies and descriptions of specific broadcast format information corresponding to each of said plurality of arranged frequencies, outputting said menu to a user through said user interface." When a button is depressed by the user, the control electronics circuitry causes the tuner to tune to the frequency associated with the preset button (see paragraph 51), which reads on the claimed, "selecting one of said plurality of arranged frequencies based on a user selection, and tuning said mobile receiving unit to said selected arranged frequency."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Morita et al with Beckmann et al to include the above menu system in order to provide improved interactive sound reproducing as suggested by Beckmann et al (see paragraph 4).

Regarding claims 2, (Previously Presented) Morita, as modified by Beckmann, discloses the selected frequency is the transmission frequency of a frequency modulated broadcast station (see paragraph 27).

Regarding claims 4 and 5, (Previously Presented) Morita, as modified by Beckmann, further discloses a user interface electrically coupled to receive from the frequency selection unit data arranged as radio signal content categories and to output a menu of categories to a listener (col. 4,

Art Unit: 2617

lines 29-37) wherein at least a portion of the menu is output on a visual display (col. 4, lines 39-43, col. 5, lines 23-26).

Regarding claim 6, (Previously Presented) Morita, as modified by Beckmann, further discloses wherein at least a portion of the menu is audibly output by the interface (see col. 21-23).

Regarding claims 7 and 8, (Previously Presented) Morita, as modified by Beckmann further discloses a user interface electrically coupled to receive and relay to the frequency selection unit a user command to select a particular content category in an arrangement of radio signal content categories stored in the frequency selection unit wherein the command is a verbal command (see Morita et al col. 3, lines 15-55).

Regarding claim 31, Morita, as modified by Beckmann further discloses wherein the location information is provided using global positioning system information (see Morita et al col. 3, lines 37-43).

Regarding claim 32, Morita, as modified by Beckmann further discloses the communication unit transmitting the data to the base station via a vehicle telephone line (see Morita et al col. 3, lines 15-23) meets providing location information using cellular wireless communications system information.

5. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Morita et al** in view of **Beckmann et al** as applied to claim 1 above, and further in view of **Lee**.

Regarding claim 3, (Previously Presented) Morita as modified by Beckmann does not show the tuning data comprises satellite transmission radio frequencies. Lee teaches a radio receiving system having the capability of frequency modulation transmission frequencies (see col. 10, lines 52-63, col. 11, lines 5-19, col. 12, lines 13-22), and satellite transmissions using satellite transmission frequencies (see col. 10, 49-59). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Morita et al and Beckmann et al with Lee to include the above use of satellite in order to provide personalized information services through available communication networks that cover a wide area such as frequency modulation, satellite and

cellular communications as taught by Lee.

6. **Claims 17, 18, 20-26 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Morita et al. (5,864,753)** in view of **Beckmann et al (US 2007/0142945)**, and further in view of **Ishikawa et al.**

Regarding claim 17, (Previously Presented) Morita et al disclose a radio station tuning system comprising a radio receiver with an electronic tuner 16, a communication unit 18, and a navigation unit 20 that includes a GPS receiver or the like (see column 3, lines 6-14 and figure 1), which reads on the claimed, "A method of tuning location-specific frequency tuning data in a mobile signal receiving unit using a frequency selection unit coupled to said mobile signal receiving unit"

A controller 14 receives data on a current position of the vehicle from the navigation unit 20, has access to the base station 200, and sends the base station the request message from the speech recognizing unit 12, the current position of the vehicle and an identification code of the vehicle (see column 3, lines 30- 47), which reads on the claimed, "Receiving geographic position information from a locations unit, said geographic position information identifying a present geographic position of said mobile signal receiving unit."

Morita further discloses it is also possible to specify radio stations offering programs of desired kinds using a display and a selector switch (see column 4, lines 40-46),

Morita does not show selecting a plurality of frequencies from the set of frequencies of broadcast signals based on the strength of said plurality of frequencies, arranging said plurality of frequencies by subject content categories and geographic areas corresponding to said plurality of frequencies.

Beckmann et al disclose a system where recorded on external storage may be information about typically either AM broadcast or FM broadcast radio stations available to the reproduction device through tuner. Typically, availability is determined by a combination of proximity to and power of the broadcast signal. The list may be assembled by the device automatically scanning the broadcast frequency spectrum and assemble a list of available radio stations by noting the frequency and by

Art Unit: 2617

measuring strengths of receives signals. Information about each radio station can also be collected and stored, including station call letters and station format (see paragraph 42), and the user may enter music format, such as type of music (see paragraph 58, which reads on the claimed, "receiving tuning data from a remote database comprising a set of frequencies of broadcast signals corresponding to different geographic frequencies; receiving user-selected content category information; determining a plurality of reception areas in which said system is located based on said geographic position information and said tuning data; selecting localized tuning data based on signal strength for a plurality of available frequencies having a signal reception area corresponding to at least one of said plurality of reception areas, said localized tuning data corresponding to signals having several broadcast forms; arranging said localized tuning data by subject content categories associated with said plurality of available frequencies and geographic areas corresponding to each of said reception areas," and, "said selected localized content information comprising a plurality of localized content-specific frequencies corresponding to said user-selected content category information," and, "said selected localized content information further comprising a description of specific broadcast format information for each of said plurality of localized content-specific frequencies; generating a menu listing said selected localized content information; outputting said menu to a user through a user interface; prompting said user for a user selection."

When a button is depressed by the user, the control electronics circuitry causes the tuner to tune to the frequency associated with the preset button (see paragraph 51), which reads on the claimed, "selecting one of said plurality of localized content-specific frequencies based on a user selection; and tuning said mobile signal receiving unit to said selected localized content-specific frequency."

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Morita et al with Beckmann et al to include the above menu system in order to provide improved interactive sound reproducing as suggested by Beckmann et al (see paragraph 4).

Morita as modified by Beckmann does not show selecting content data when said system moves to a new reception area among said plurality of reception areas. Ishikawa et al disclose when it is

judged that the level of a signal being received is judged is not higher than a predetermined threshold level, a new broadcasting station is re-selected in order to select an appropriate station, which prevents a user from listening to a degraded station signal (see col. 4, lines 11-40, col. 8, line 6 to col. 9, line 6), which reads on the claimed, "selecting localized content information...when said system moves to a new reception area."

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Morita et al and Beckmann et al with Ishikawa et al to include the above reselection procedure in order to ensure the selection of high quality broadcasting stations for listening as taught by Ishikawa.

Regarding claim 18, (Previously Presented) Morita, as modified by Beckmann, discloses the selected frequency is the transmission frequency of a frequency modulated broadcast station (see paragraph 27).

Regarding claims 20, 21 and 22, (Previously Presented) Morita, as modified by Beckmann, further discloses a user interface electrically coupled to receive from the frequency selection unit data arranged as radio signal content categories and to output a menu of categories to a listener (see Morita et al col. 4, lines 29-37) wherein at least a portion of the menu is output on a visual display (see Morita et al col. 4, lines 39-43, col. 5, lines 23-26).

Regarding claim 23, (Previously Presented) Morita, as modified by Beckmann, discloses said user-selected content category information is provided by a system user selecting one or more content categories via the Internet and wherein the tuning data is provided by downloading via the Internet (see paragraphs 43, 55)

Regarding claim 24, (Original) Morita, as modified by Beckmann, discloses the user selects the one or more content categories via the World-Wide Web (see paragraphs 43, 55).

Regarding claim 25, (Previously Presented) Morita, as modified by Beckmann, further discloses wherein the location information is provided using global positioning system information (see Morita et al col. 3, lines 37-43).

Regarding claim 26, (Previously Presented) Morita, as modified by Beckmann, further discloses

Art Unit: 2617

the communication unit transmitting the data to the base station via a vehicle telephone line (see Morita et al col. 3, lines 15-23) meets providing location information using cellular wireless communications system information.

Regarding claim 28, (Previously Presented) Morita, as modified by Beckmann, further discloses the radio station tuning system being configured to automatically has access to a base station when the vehicle is not running in an area where the desired program is receivable (see Morita et al col. 4, lines 9-15), reads on the particular frequency is selected based on content category of the broadcast signal being received prior to the change in signal reception condition.

7. **Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Morita et al in view of Beckmann et al and Ishikawa et al** as applied to claim 17 above, and further in view of **Lee**.

Regarding claim 19, (Previously Presented) Morita, Beckmann and Ishikawa does not show the tuning data comprises satellite transmission radio frequencies. Lee teaches a radio receiving system having the capability of frequency modulation transmission frequencies (see col. 10, lines 52-63, col. 11, lines 5-19, col. 12, lines 13-22), and satellite transmissions using satellite transmission frequencies (see col. 10, 49-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Morita et al, Beckmann et al and Ishikawa et al with Lee to include the above use of satellite in order to provide personalized information services through available communication networks that cover a wide area such as frequency modulation, satellite and cellular communications as taught by Lee.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing

date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUY C. HO whose telephone number is (571)270-1108. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alex V. Eisen can be reached on 571-272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Huy Ho/
Examiner, Art Unit 2617

/Alexander Eisen/

Supervisory Patent Examiner, Art Unit 2617